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ACCIDENTAL HEMORRHAGE IN LABOR.¹

BY

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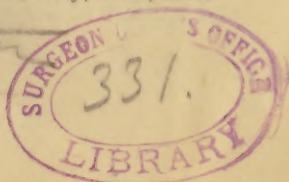
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CASES are occasionally met in the lying-in room, where the first morbid symptom is flooding. The title "unavoidable" or "accidental" hemorrhage is given to this, according as it is associated with placenta previa or with a premature separation of a normally located placenta. The form due to placenta previa, "unavoidable hemorrhage," will not be discussed in this paper. The other, "accidental hemorrhage," is so rare that a personal experience with it may excuse the present writing. In that class I wish to unite cases due to placental detachment with all others in which hemorrhage, before the completion of the second stage, is prominent. When the accoucheur is first called to a woman with ante-partum bleeding, he may not immediately decide upon its exact source, whether it is intra- or extra-uterine. But when placenta previa is excluded, careful examination will place all other forms of hemorrhage from the parturient canal, found at any time of the last two months of pregnancy before the end of the second stage, in one of the three following divisions: 1st, those caused by tearing of the lower uterine outlet; 2d, those due to wounds of the vagina or vulva; 3d, those from rupture of intra-uterine vessels of either the maternal or fetal systems.

1st. Bleeding from rupture of the cervix is frequent in primiparæ, in the muscular laboring women, in the neurotic, and when the tissues are manifestly diseased from pre-existing inflammation or cancer. Such bleeding is so common that it is considered by many to be natural to parturition, and the "show" is accepted as a sign of the actual onset of labor. But the amount of blood lost is trifling and its source self-evident. Nothing but the engagement of the child in the outlet can provoke it, barring, of course, improper fingering by the attendant. When, therefore, the "show" rises to the dignity of a hemorrhage, methodical investigation is required, and usually prompt

¹ Read, in abstract, at Maine State Medical Society, June, 1888.

presented by the author



emptying of the uterus is the first step in its arrest. After delivery, if the flow is not checked, it may be necessary to resort to active surgical helps which do not come into the scope of this paper.

2d. Hemorrhage from varix, thrombus, or other anomalies of the genitals is manifestly under the immediate sight, if properly directed. The treatment is first to complete the second stage, and then act in accordance with well-understood surgical rules.

These two classes of ante-partum hemorrhage are, therefore, plain in diagnosis and treatment, and may be thus briefly sketched. They will be met by the physician as he is influenced by special knowledge of these organs, or as he is wont to temporize, rather than to practise.

3d. The final division, hemorrhage before delivery due to intra-uterine causes, cannot be put aside so cursorily. The diagnosis is rarely absolute, the reason too often unsettled, and the treatment halts lamely upon inexperience or "the aid of nature." "A few write from personal observation, and these unite with one consent in stating how obscure are the signs, how embarrassing the diagnosis, how fatal the prognosis" (Goodell). A rare freak of labor, certainly! In 22,498 cases of labor at Guy's Hospital, "accidental hemorrhage" happened only three times; and in 156,000 cases at the Dublin Lying-in Hospital, not a single case was reported. Up to 1869, Goodell found only 106 reported cases, and after careful examination of the last four years' catalogues of the *Index Medicus*, I noticed only 3. Probably other instances are unrecorded, but careful inquiry among obstetricians of large practice fails to find more than two or three who have ever seen the accident. The literature also upon the subject is, with one noticeable exception, scanty. That one exception is pre-eminent for scholarship and completeness, and is an article by Goodell in the *AM. JOUR. OF OBSTETRICS* for September, 1869. It examines the entire subject, both of concealed and apparent hemorrhage from the gravid uterus, as it occurs during the last two months of pregnancy, summarizes 106 cases, and argues therefrom upon diagnosis, causation, and treatment.

In this admirable paper cases are separated into two grades: the "franker," or more common and milder variety, in which the blood dissects down between the membranes and the womb, and appears at the outlet, and a severer form, where the outlet

remains closed, and the blood is concealed within the cavity. Among several hundred deliveries, I have met with three cases of the milder variety of "accidental hemorrhage," and therefore can speak personally of that form. A short report of these will show their clinical features.

CASE I.—May 16th, 1880. Irish, 35, Xpara, strong and healthy; labor in progress through the day. Attended by a stupid compatriot. Was called because of the delay in delivery. Patient was found with extreme pallor and exhaustion, head low in pelvis, in third position, and a little blood was running from the uterus. Pains had been feeble for several hours, but while examining, a sudden contraction expelled a large still-born child. Placenta came away at once spontaneously with a quantity of large firm coagula. Firm manual compression caused good contractions, and the patient slowly rallied. It was found that there was an extensive rupture of the vessels of the cord at their juncture with the placenta, which break must have taken place *in utero*, since no traction was made by myself upon the cord. No cause for the flooding found, except the break in the cord mentioned.

The noticeable points in the history are ante-partum hemorrhage from rupture of cord-vessels, inertia, and shock from loss of blood. Patient multipara and child still-born.

CASE II.—Dec. 27th, 1886. French, 25, IIIpara, healthy, previous labors normal. Flooding began at 10 A.M. while doing house-work; three attacks before I saw her at noon. Had fallen down a flight of stairs several days before without apparent serious injury, gestation otherwise normal, last menstruation April 6th; and connection after April 15th. At present in eighth month and first week of pregnancy. Apart from the flowing, the only complaint made was of flatulent colic. Put in bed at 2 P.M., with slight bleeding present. No wound of the canal found, cervix an inch long and open to the finger, head presenting. Child active and its heart sounds distinct, placental souffle at left fundus.

Induction of labor decided upon, for the following reasons: the bleeding was intra-uterine, and not due to placenta previa, hence most probably from premature detachment of the placenta; the quantity of blood lost negatived reliance upon ergot and rest in bed. The pelvis would offer no obstruction to delivery, judging from past labors; though the child was at present viable, its death was imminent unless the drain could be stopped; the mother's condition good, and her consent readily given to operation.

Dilatation commenced with the finger and continued at intervals for three hours, when the internal os opened, and head

had descended to the outlet. Slight contractions were felt by the operator, though not by the patient. When woman was upon the left side, there was a little continuous flow, which stopped if she turned upon the back. After four hours the external os admitted two fingers, the head was fully engaged in superior strait, labor was in active progress. The membranes were then broken, but no water escaped until after the head was lifted, when a large quantity flowed out. No hemorrhage after rupture of the membranes, and pains stopped also. Patient slept two hours, all the time lying on the side. To arouse the uterus, quinine (grains x.) was given, but without much effect. General condition good, occasionally the outlet was stretched by the finger, for at no time did it seem to open naturally.

Finally after eight hours pains became energetic, even to extreme agony. Ether to full extent was given, cervix pulled over the caput, and child born with five or six pains. Cord around the neck loosely, third stage perfectly normal. placenta expelled spontaneously. Child hardly fully grown, skin wrinkled, weight eight pounds, cried lustily, and is now (six months afterwards) strong and well. The placenta was large, fully one-quarter had been torn off from its site ante partum, and upon this side was a thick firm clot. Flooding threatened after delivery of the secundines, but was prevented by steady compression. Lying-in was perfectly normal.

Interesting points in this case are, a fall before the flooding, flatulent colic coincident, the effect of puncturing the sac upon the hemorrhage, the ease with which labor was induced—the method being that advocated before this Society in 1883 by our venerable associate, Dr. Burbank—the stubborn inflexibility of the uterine outlet which persisted to the last. The case is apparently one of typical “accidental hemorrhage.”

CASE III.—January 17th, 1888. Irish, 30, IVpara, strong and well, gestation natural; in active house-work up to labor. Pains began in morning. Sac ruptured at 7 P.M., just as I was summoned; waters abundant; pelvis and canal ample; uterine outlet wide open, cephalic presentation; pains feeble; no fetal nor placental pulsations. Uterus appeared to be in two parts on left side, where a deep groove could be seen and felt in it. Soon after the sac broke, blood began to trickle out of the womb, and the flow increased to be quite a stream. No apparent reason for this hemorrhage, nor had the cervix been injured in the examination. Changing from left side to back lessened the flow, but increased the pains; the patient, however, refused to remain in the dorsal posture because of the increased discomfort. The condition then was as follows: a roomy pelvis and canal in a multipara, os fully dilated, pains ineffective, head engaged, probably a dead child, and an increasing uterine hemorrhage. Simpson's orceps were immediately applied at the superior strait, and head

drawn in the cavity, contractions were increased, and head delivered unaided, with two or three pains. Child dead, weight ten pounds, cord twined closely about the neck, where it had made a deep crease. Third stage normal, placenta expelled spontaneously, a thick, dark clot covered its outer quadrant, and a handful of soft coagula were removed with it. The lying-in undisturbed. Patient said that, of the four pregnancies, the two first children were still-born.

Here are the following interesting points: Ante-partum hemorrhage and feeble contractions in second stage without evident reason, irregularity in uterine contour, coincidence between hemorrhage and position of patient (as in second case), and strangulation of child by torsion of cord about its neck.

The symptoms of "accidental" and "concealed hemorrhage" are admirably given in Goodell's paper before referred to. Analysis of the cases therein gives as the chief symptoms, collapse, pain in every degree, extreme feebleness of uterine action, absence of fetal sounds and movements, marked distention of the womb, and proves that the diagnosis is affirmed by a show of blood, and emphasized by a serous discharge (from serum squeezed out of blood-clots). This list includes symptoms peculiar to both grades of the accident, and comparison of my own cases shows a decided agreement with them.

I. The patients were all multiparæ, which agrees with the common experience. In sixty-four cases noted, only eight were primiparæ. The more the muscles specially involved in gestation are stretched in successive pregnancies, so much the more is this variety of flooding found to occur. II. The powers of the womb for normal work were injuriously weakened in all these cases (Case I., unusual feebleness of labor pains; Case II., entire cessation of contractions for two hours after membranes ruptured; Case III., inertia in second stage, and forceps required). III. One woman had the unsymmetrical tumor of the womb that points to disturbed muscular co-ordination, and perhaps also to a localized effusion. In each case, there was the peculiar tension and sensitiveness of the womb referred to by Goodell and others. IV. The effect upon the flowing produced by rupture of the sac was marked in the only case where it was possible to observe it. The firmer parts of the child are plainly a better tampon against the leaky vessels than the fluid of the amnion. Goodell says: "In the franker forms of accidental hemorrhage" (when the blood escapes at the os), "by an early evacuation of the waters, the hemorrhagic area is rapidly diminished." V. Notice the large

fetal mortality. The one child born living was saved only by direct interference with the helplessness of Nature. Desmond is quoted as saying : " All cases proved fatal except those in which uterine action was present, and the contents speedily evacuated, either by art or Nature, while there is a trifling ratio in favor of those where the hemorrhage occurred externally." " Of 106 cases of all grades of severity, 54 mothers died ; of 107 children, 101 died. Death terminated almost every case in which suffering from pain was either absent or not a prominent symptom " (Goodell). VI. While there may not be any other relation than coincidence between ante-partum hemorrhage and the posture of the woman in labor, yet in two of my cases this association was an undoubted fact. When upon the back, there was little flowing, but greater pains ; on the contrary, if upon the side, pains were less, but flowing prominent. Accepting the common physiology of labor, it is easy to account for differences in pain (*i. e.*, contractile pain) according to the position assumed in the second stage. For the variation in the amount of blood lost, a rational explanation would be this : the abdominal muscles act presumably less effectively when the lateral posture is taken ; there is then less compression of the parts inclosed against the firmer post-abdominal fascia, bones, etc., hence less intra-uterine pressure and feebler hemostatic results. Change to the dorsal position reverses these conditions, and the result is more active contractions, but less bleeding. VII. And the flooding itself, being unexpected and unnatural, thereby called attention to its significance. It was continuous, not in spurts as in placenta previa, and in this respect was diagnostic of "accidental" rather than "unavoidable hemorrhage."

The clinical history of these united cases confirms Lusk's words upon the symptoms of this disaster : "an alarming state of collapse, pains often excessive, absence or extreme feebleness of the pains of labor, marked distention of the uterus, sometimes a lateral bulging of the uterine walls, a serous discharge, a show of blood, and blood in the liquor amnii " (page 566).

It is impossible to give, except in general terms, an explanation for the ultimate cause of too hasty placental separation. The mechanical theory of Baudelocque, or later the opinion of Barnes, that hemorrhage is the origin of the process, will account for the fact. Hart says that the separation in the third stage of ordinary labor is just as in placenta previa—not from

diminution of the placental site, but during the expansion in area of this site after retraction. Besides, when the placental site increases in area after retraction, the placenta does not increase in like proportion, but remains smaller than it, owing to the interference in the maternal and fetal parts of the placenta (*British Gyneco. Jour.*, Nov., 1887). While physical causes undoubtedly provoke the disaster, yet it is just as certain that in some unknown manner mental states may also do so. Any condition, be it abstract or material, which is a possible excitomotor to the gravid uterus, may start a hemorrhage that ends only in the death of child and parent. The following reasons are recorded for the "placental apoplexy": violent anger, facial neuralgia with vomiting, pumping water, being thrown down in a quarrel, straining at stool, hemorrhagic diathesis, great fatigue, drinking and carousing, getting into a deep bathtub, washing clothes, violent coitus, sleigh riding through deep "pitches," external compression of the uterus (in labor) by midwife, accident with slight momentary shock, a fall down-stairs. One other cause, I believe, should be accepted, that is, a short funis. I found in one hundred and thirty-six cases at term the cord twenty-one times either naturally short (that is, short enough to materially delay birth), or artificially so by being twined around some part of the child. Though of common occurrence and generally of little importance, this brevity of the cord may handicap the child, imperil the placenta, and even be a direct source of death. The danger is that the descent of the child may make traction enough upon the cord to break its vessels, either in continuity or at their divergence upon the placenta (see my own case, and also case of Hamil, in Phila. Obst. Soc., reported April 5th, 1888). The placenta also may be pulled away from its attachment (which appears to be the most usual effect of such traction), when even a relatively small quantity of blood effused between the two deciduæ is fully able to induce contractions that will be fatal to the continuance of gestation. In such cases the result is disastrous, "the mortality far exceeding placenta previa" (Goodell). Of my own cases, the one who received the fall had the cord loosely about the neck, in another it was around the neck and tight enough to kill by strangling, and the third had broken cord-vessels, from probable intra-uterine traction.

The diagnosis of "accidental hemorrhage" of the gravid uterus has been so often anticipated in the preceding pages that

only a summary upon that point is necessary. If blood flows from the uterus before the end of the first stage, and placenta previa can be excluded, it may be believed with tolerable certainty that the cause is a premature separation of the placenta, that being the part most commonly found at fault in recorded cases. I do not believe it possible, *before* delivery, to fix upon the special organ or tissue (placenta, cord, etc.) disturbed nor do I see what advantage could be gained thereby. If there is no blood visible, but the patient at the time specified is in such a condition as has been mentioned under the symptoms, "concealed" hemorrhage may be confidently inferred. The crucial test is puncture of the membranes. In either of the two forms of the accident, "apparent" or "concealed," if injury or mental strain can be assured to have preceded the flooding and the patient has already borne children, the diagnosis is much clearer. It has been shown from clinical experience that rupture of the uterus, which has many symptoms in common with "accidental hemorrhage," takes place after escape of the waters—a point to be weighed in the decision.

The prognosis is self-evident. Always a cause of anxiety to the physician, there is hardly any condition of the pregnant woman so dangerous to herself as ante-partum hemorrhage. If the blood shows itself externally, and the diagnosis is thereby made plainer, the mother's chances are somewhat better. But in either mild or grave variety, it is the rare exception for the child to be born alive, under any plan of treatment.

If in no other phase of dystocia, here at least there should be no question as to the practice. The end to be desired is delivery at the earliest moment that it can be safely effected to the mother. The vaunted powers of nature are unreliable for this purpose, and just here art is Nature's mistress. If the patient is not in labor and the cervix unopened, it should be dilated, preferably by the finger. The membranes should be broken and the waters evacuated early, then forceps or version used as soon as the outlet will permit. The benefits of anesthesia in allaying shock and as a uterine regulator ought not to be denied, and the A. C. E. mixture is peculiarly acceptable. Before the end of the second stage, ergot is contra indicated, because the womb is not in a condition to respond to it. Afterwards it may be needed, and then is best used hypodermatically.